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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/522,440

11/29/2005

Peter John Miller

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EXAMINER

GAMI, TEJAL

ART UNIT

PAPER NUMBER

2121

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DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/522,440	<b>Applicant(s)</b> MILLER ET AL.	
	<b>Examiner</b> TEJAL J. GAMI	<b>Art Unit</b> 2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 19-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

1. This office action is responsive to an AMENDMENT entered September 28, 2007 and ELECTION/RESTRICTION entered March 28, 2008 for the patent application 10/522440.

### *Election/Restrictions*

2. Applicant's election without traverse of claims 1-18 in the reply filed on March 28, 2008 is acknowledged.

Claims 19-31 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 03/28/2008.

### *Status of Claims*

3. Claims 1-31 were rejected in the last Office Action dated March 28, 2007.

As a response to the March 28, 2007 office action, Applicant has Amended claims 1, 3, 4, 12-14, 16, and 18 of the elected claims as a response to the election/restriction requirement filed March 28, 2008.

Claims 1-18 are presented for examination in this office action.

***Information Disclosure Statement***

4. The prior art must be listed on a form PTO-892, PTO-1449, PTO /SB /08A or 08B, or PTO /SB /42 (or on a form having format equivalent to one of these forms). These forms must be properly completed. See MPEP § 2657.

***Claim Objections***

5. Examiner thanks Applicant for amending the claims in response to the objections of the previous office action. Those objections have been withdrawn.

***Claim Rejections - 35 USC § 112***

6. Examiner thanks Applicant for amending the claims in response to the 112 Second Paragraph rejections of the previous office action. Those rejections have been withdrawn.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-6, 9-15, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Ulybin (SU 1619279; Translation).

**As to independent claim 1**, Ulybin discloses an electronic system (e.g., computing system) comprising a plurality of fault-monitoring systems (e.g., several devices) each of which is adapted to output a fault signal (e.g., fault simulation output 13) when an input indicates that the electronic system is in a fault condition associated with the fault-monitoring system (see Page 3), wherein:

the fault-monitoring systems are arranged in a cascade fashion (e.g., cascade of several devices) such that a fault signal output (e.g., fault simulation output 13) from one fault-monitoring system is provided as an input to a subsequent fault-monitoring system in the cascade of fault-monitoring-systems to simulate a fault condition associated with the subsequent fault-monitoring system (see Page 3).

**As to independent claim 10**, Ulybin discloses a self-test method (e.g., testing the fault tolerance) for an electronic system (e.g., computer system) comprising a plurality of fault-monitoring systems (e.g., several devices) each of which is adapted to output a fault signal (e.g., fault simulation output 13) when an input indicates that the electronic system is in a fault condition associated with the fault-monitoring system (see Page 3), the fault-monitoring systems being arranged in a cascade fashion (e.g., cascade of several devices) such that a fault signal output (e.g., fault simulation output 13) from one fault-monitoring system is provided as an input to a subsequent fault-monitoring system in the cascade of fault-monitoring systems (see Page 3), the method comprising:

inputting the fault signal from one fault-monitoring system to a subsequent fault-monitoring system to simulate a fault condition associated with the subsequent fault-monitoring system (see Page 3).

**As to dependent claim 2**, Ulybin teaches an electronic system according to claim 1 wherein the output of a final fault-monitoring system in the cascade is used as an indicator of a fault in one of the fault-monitoring systems (see Page 3).

**As to dependent claim 3**, Ulybin teaches an electronic system according to claim 1, the electronic system further being arranged to:

place the electronic system into a first fault condition and monitor for a generation of a first fault signal from a first fault-monitoring device, on the generation of a first fault signal from the fault-monitoring device after placing the electronic system into a first fault condition, to input the first fault signal to the second fault-monitoring device, and in response to an output from a final fault-monitoring device to store a record to this effect in non-volatile memory (see Page 14, Third Paragraph).

**As to dependent claim 4**, Ulybin teaches an electronic system according to claim 3 wherein, on subsequent reversion of the electronic system to a non-fault condition, the electronic system is arranged to check whether the non-volatile memory includes a record and when the non-volatile memory does not include a record on subsequent reversion (e.g., do not match), generate an alarm signal (e.g., when runs at the inputs of comparison block 3 do not match, its output shows the value "0," which is then recorded to trigger 4 by the signal from input 12) (see Page 9, Second Paragraph).

**As to dependent claim 5**, Ulybin teaches an electronic system according to claim 1 wherein a first fault-monitoring system is adapted to output a fault signal when the electronic system is placed into a switched-off condition (e.g., with the extended non-occurrence of the tracked condition in the computing system, the condition will modify automatically) (see Page 10).

**As to dependent claim 6**, Ulybin teaches an electronic system according to claim 5 wherein the first fault-monitoring system is a watch-dog system (e.g., the frequency of time markers is selected so that it ensures overflow of counter 2 after the period of time specified for fault simulation at one address) (see Page 5, Second Paragraph).

**As to dependent claim 9**, Ulybin teaches an electronic system according to claim 1 further comprising storing a record of a fault signal output by any of the fault-monitoring systems to enable identification (e.g., address identifiers) of a defective fault-monitoring system (see Page 3).

**As to dependent claim 11**, Ulybin teaches a self-test method according to claim 10 wherein the output of a final fault-monitoring system in the cascade is used as an indicator of a fault in one of the fault-monitoring systems (see Page 3).

**As to dependent claim 12**, Ulybin teaches a self-test method according to claim 10, further comprising:

placing the electronic system into a first fault condition and monitoring for a generation of a first fault signal from a first fault-monitoring device, on the generation of a first fault signal from the fault-monitoring device after placing the electronic system

into a first fault condition, inputting the first fault signal to the second fault-monitoring device, and in response to an output from a final fault-monitoring device storing a record to this effect in non-volatile memory (see Page 14, Third Paragraph).

**As to dependent claim 13**, Ulybin teaches a self-test method according to claim 12 further comprising, on subsequent reversion of the electronic system to a non-fault condition, checking whether the non-volatile memory includes a record and when the non-volatile memory does not include a record on subsequent reversion (e.g., do not match), generating an alarm signal (e.g., when runs at the inputs of comparison block 3 do not match, its output shows the value “0,” which is then recorded to trigger 4 by the signal from input 12) (see Page 9, Second Paragraph).

**As to dependent claim 14**, Ulybin teaches a self-test method according to claim 10 further comprising outputting a fault signal from the first fault-monitoring system when the electronic system is placed into a switched-off condition (e.g., with the extended non-occurrence of the tracked condition in the computing system, the condition will modify automatically) (see Page 10).

**As to dependent claim 15**, Ulybin teaches a self-test method according to claim 14 wherein the first fault-monitoring system is a watch-dog system (e.g., the frequency of time markers is selected so that it ensures overflow of counter 2 after the period of time specified for fault simulation at one address) (see Page 5, Second Paragraph).

**As to dependent claim 18**, Ulybin teaches a self-test method according to claim 10 further comprising storing a record of a fault signal output by any of the fault-

monitoring systems to enable identification (e.g., address identifiers) of a defective fault-monitoring system (see Page 3).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ulybin (SU 1619279) and further in view of Pierret et al. (U.S. Patent Number 5,079,496).

**As to dependent claim 7**, Ulybin teaches an electronic system according to claim 5. Ulybin clearly teaches an electronic system, but does not mention a vehicle ignition key. Pierre teaches electronic system is associated with a vehicle and the electronic system is placed into a switched-off condition by turning an ignition key (see Pierret: Col. 1, Lines 27-33). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized a vehicle ignition key as taught by Pierre to the electronic system of Ulybin because the closed ignition switch enables the battery to be charged (see Pierret: Col. 1, Lines 27-33).

**As to dependent claim 16**, Ulybin teaches a self-test method according to claim 14. Ulybin clearly teaches an electronic system, but does not mention a vehicle ignition key. Pierre teaches electronic system is associated with a vehicle and the electronic

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system is placed into a switched-off condition by turning an ignition key (see Pierret: Col. 1, Lines 27-33). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized a vehicle ignition key as taught by Pierre to the electronic system of Ulybin because the closed ignition switch enables the battery to be charged (see Pierret: Col. 1, Lines 27-33).

11. Claims 8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ulybin (SU 1619279) and further in view of Aslin et al. (U.S. Patent Number 4,943,919).

**As to dependent claims 8 and 17**, Ulybin teaches an electronic system. Ulybin clearly teaches a second fault-monitoring system has as an input the fault signal from the first fault-monitoring system, the second fault-monitoring system being adapted to output a fault signal (see Ulybin: Page 3), but does not mention an under- or over-voltage condition. Aslin teaches an electronic system experiencing an under- or over-voltage condition (see Aslin: Col. 12, Lines 38-41). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized voltage condition as taught by Aslin to the fault-monitoring system of Ulybin because the analog discrete fault data is analyzed in the same manner as the digital fault data (see Aslin: Col. 12, Lines 47-49).

### ***Response to Arguments***

12. Applicant's amendment and arguments filed September 28, 2007 for claims Elected have been fully considered. The amendment does not overcome the original

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art rejection and the arguments are not persuasive. The following are the Examiner's observations in regard thereto.

Applicant Argues:

Ulybin discloses fault simulation systems, not fault monitoring systems.

Examiner Responds:

Examiner is not persuaded. The prior art tests fault tolerance and therefore monitors the fault.

Applicant Argues:

Firstly, referring to Figures 1 and 2 of the Ulybin document, the fault simulating systems (20) in Ulybin do not output a fault signal "when an input indicates that the electronic system is in a fault condition". Instead, the fault simulating systems (20) generate fault signals on their output (13) so as to attempt to cause a fault condition in a computer system under test. In addition, in Ulybin, the fault condition is not associated with the fault simulating system, instead it is associated with the computer system under test.

Examiner Responds:

Examiner is not persuaded. The fault insertion of the prior art "indicates" a fault condition. Under such consideration, the claims as written are anticipated by the prior art.

Applicant Argues:

Secondly, in Ulybin, the fault signal output (13) is not provided as an input to a subsequent fault simulating system. Instead, in Ulybin, the fault signal output (13) from the last module is fed into an input (14) of the first module, not into a subsequent fault simulating system, as can be seen in Figure 2. Furthermore, in Ulybin, this is not done to simulate a fault condition associated with the subsequent fault simulating system. Ulybin is instead concerned with injecting fault simulation pulses into a computer system under test in order to simulate fault conditions in the computer system under test. Independent claims 1 and 10 of the present invention are therefore novel over the disclosure of the Ulybin document.

Examiner Responds:

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Examiner is not persuaded. The prior art discloses a daisy-chained fault signaling system. Under such considerations, the prior art anticipates the claims as written.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Brearley (U.S. Patent Number: 4,270,808) teaches anti-lock brake control systems for multi-axle vehicles.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tejal J. Gami whose telephone number is (571) 270-1035. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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